type of composition, the particular indication being treated, the mode of administration, whether the desired benefit is prophylactic or therapeutic, the severity of the indication being treated and the age and weight of the patient, and effectiveness of the dosage form. Determination of an effective dosage is well within the capabilities of those skilled in the art.

[0135] Initial dosages may be estimated initially from in vitro assays. Initial dosages can also be estimated from in vivo data, such as animal models. Animals models useful for testing the efficacy of compositions for enhancing hair growth include, among others, rodents, primates, and other mammals. The skilled artisans can determine dosages suitable for human administration by extrapolation from the in vitro and animal data.

[0136] Dosage amounts will depend upon, among other factors, the activity of the conditioned media, the mode of administration, the condition being treated, and various factors discussed above. Dosage amount and interval may be adjusted individually to provide levels sufficient to the maintain the therapeutic or prophylactic effect.

[0137] Presented below are examples discussing generation of ECM compositions contemplated for the discussed applications. The following examples are provided to further illustrate the embodiments of the present invention, but are not intended to limit the scope of the invention. While they are typical of those that might be used, other procedures, methodologies, or techniques known to those skilled in the art may alternatively be used.

Methods of Making a Composition

[0138] In some aspects, a method of producing a composition for improvement of a tissue in a subject is provided. The method comprises culturing fibroblast cells under hypoxic conditions on microcarrier beads or a three dimensional surface in a suitable growth medium, under 1-5% oxygen, thereby producing multipotent stem cells, wherein the multipotent stem cells produce and secrete into a growth medium a composition that promotes repair and regeneration of damaged tissue when administered to the region of tissue in need of repair in the subject and collecting the growth medium, thereby producing the composition. In some embodiments, additives to the composition comprise at least one botanical, at least one extract, at least one peptide, at least one protein and/or at least one marine extract. In some embodiments, the culturing is performed on microcarrier beads or a three dimensional surface in a suitable growth medium. In some embodiments, the culturing is performed for at least two weeks. In some embodiments, the growth medium is collected after two weeks. In some embodiments, the method further comprises adding a seed extract to the composition. In some embodiments, the method further comprises adding a marine extract to the composition. In some embodiments, the method further comprises adding a bacterial ferment to the composition. In some embodiments, the growth medium further comprises stem cell factors. In some embodiments, the growth medium further comprises cytokines. In some embodiments, the growth medium further comprises at least one matrix protein. In some embodiments, the at least one peptide comprises dimer tripeptide 43 and/or trifluoroacetyl tripeptide-2. In some embodiments, the subject is in need of tissue repair. In some embodiments, the subject has fine and or deep wrinkles. In some embodiments, the subject exhibits tactile and/or skin roughness of the tissue. In some embodiments, the subject has hyperpigmentation. In some embodiments, the subject has photodamage. In some embodiments, the subject lacks evenness in pigmentation and/or skin tone. In some embodiments, the subject has a skin coloring on the Fitzpatrick scale of 1, 2, 3, 4 or 5.

Compositions

[0139] A composition made by the method of any one of the embodiments of any one of each or any of the above- or below-mentioned embodiments for use in treating a subject is provided.

[0140] In some embodiments, the composition further comprises at least one botanical.

[0141] In some embodiments, the composition further comprises at least one extract.

[0142] In some embodiments, the composition further comprises at least one peptide.

[0143] In some embodiments, the composition further comprises a seed extract.

[0144] In some embodiments, the composition further comprises a marine extract.

[0145] In some embodiments, the composition further comprises a bacterial ferment.

[0146] In some embodiments, the composition further comprises stem cell factors.

[0147] In some embodiments, the composition further comprises cytokines.

[0148] In some embodiments, the composition further comprises at least one matrix protein.

[0149] In some embodiments, the at least one peptide comprises dimer tripeptide 43 and/or trifluoroacetyl tripeptide-2.

[0150] In some embodiments, a composition is provided comprising: growth medium, wherein the growth medium is collected from multipotent stem cells produced under hypoxic conditions; at least one botanical, at least one extract, and at least one peptide.

[0151] In some embodiments, the composition is odorless.

[0152] In some embodiments, the composition is clear.

Methods of Treatment

[0153] In some embodiments, a method of improving the appearance of an individual is provided, the method comprising topically applying the composition of any one of embodiments herein, onto a tissue of a subject to thereby improve the aesthetic quality of the tissue.

[0154] In some embodiments, the subject has fine or deep wrinkles.

[0155] In some embodiments, the subject has tactile and/or skin roughness of the tissue.

[0156] In some embodiments, the subject has loose or sagging skin.

[0157] In some embodiments, the method improves roughness of skin.

[0158] In some embodiments, the method restores volume moisture to the tissue.

[0159] In some embodiments, the method results in reduced inflammatory response of the tissue.

[0160] In some embodiments, the subject is in need of tissue repair.

[0161] In some embodiments, the subject is suffering from a burn wound.